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EXAMINER

HEFFINGTON, JOHN M

ART UNIT	PAPER NUMBER
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2179

NOTIFICATION DATE	DELIVERY MODE
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11/19/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/690,611

Applicant(s)

CHAUDHRI, IMRAN A.

Examiner

John M. Heffington

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6 and 9-58 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,4-6 and 9-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

This action is in response to amendment filed 28 August 2007. Claims 1, 23-35 and 47 have been amended. Claims 2, 3, 7 and 8 have been canceled. Claims 1, 4-6 and 9-58 have been considered and are pending below.

Response to Arguments

1. Applicant's arguments filed 10 August 2007 have been fully considered but they are not persuasive. Applicant argues that the examiners cited prior art, Simpson (Windows 95 Uncut) does not disclose that a "normal" cursor is changed to either a "busy" cursor or a "working in background" cursor when the "normal" cursor is moved over an application window that is busy in the foreground. The examiner assumed that it is well known that the Microsoft Windows® operating systems beginning with Windows 95® change the "normal" cursor to a "busy" cursor when the "normal" cursor is moved over a window containing a busy application, and then changes the "busy" cursor back to a "normal" cursor when moved back over the desktop (assuming that the operating system is not busy) or over a window containing an application that is not busy. It was under this assumption that the examiner cited the various cursor types and their functions disclosed in Simpson and did not cite further art disclosing explicitly that Windows 95® changes the cursor depending on the state of the window or dialog that the cursor is hovering over. However, Livingston et al. (Windows 95® Secrets) discloses that the "working in background" cursor is displayed indicating that Windows 95® or a 32-bit multithreaded application is busy but using a background thread, **so you**

can proceed with something else if you want (page 614, table 24-1). Further, Livingston discloses that the “busy” cursor is displayed indicating that Windows 95® or an application is busy trying to accomplish some task before it can proceed (page 614, table 24-1). Livingston also discloses that “vertical”, “horizontal”, or diagonal resize” cursors are displayed depending on the window position occupied by the cursor (page 614, table 24-1), thereby disclosing that Windows 95® dynamically changes the cursor depending on the screen position. With regard to the “working in background” cursor and the “busy” cursor, these cursors are displayed specific to applications in addition to the operating system. That is, if one application is busy, then the “busy” cursor or the “working in background” cursor will be displayed over the window for that application. However, if the cursor is moved over a window containing an application that is not busy, then the “normal” cursor will be displayed. Another example of relevant prior art is Blenkhorn et al. (Full-Screen Magnification for Windows Using DirectX Overlays). Blenkhorn discloses that the standard arrow cursor will be changed to an hourglass when the application or operating system is busy (page 228, column 2, paragraph 3), and Windows changes the mouse pointer for an application, e.g., when a pointer turns to an hourglass, the new cursor is displayed (page 228, column 2, paragraph 5).

With respect to the applicants argument offered for claim 23, applicant argues that claim 23 discloses changing the tail of an “arrow” cursor to a second image to create a hybrid cursor whereas the cited art discloses adding a second image to an “arrow” cursor but not replacing the tail of the “arrow” cursor. The “arrow” cursor is so ubiquitous in the

graphical user interface art that the cursor has come to be known as the "normal" cursor (Simpson, page 138, figure 7-3) or the "standard" cursor (Blenkhorn, page 228, column 2, paragraph 3). Other cursor shapes could serve the same function as the "arrow" cursor, for example, the "cross" cursor or the "caret" cursor, and indeed, there are many custom cursors available to replace the "arrow" cursor. Once the shape of the cursor is established, it is recognized for performing the functions that the "standard" cursor is supposed to perform, i.e. point, select, drag, highlight, etc. A compound or hybrid cursor is formed to convey more information to the user. For example, an hourglass indicates that an application is busy and a question mark indicates that a help item will be displayed. With an "arrow" cursor, the tail serves no function other than to give the overall impression of an arrow, the shape that has become known as the "standard" cursor. As has been previously noted, any number of cursor shapes which have no tail could replace the "arrow" cursor. Further, a secondary image could be added to any one of these other shapes to form a compound or hybrid cursor to convey additional information than the "standard" cursor. Where this secondary image is added to the "standard" cursor, whether the secondary image is placed to the right of the "standard" cursor, above it, or replacing the tail, is a matter of design choice. Therefore, Simpson reads on the limitations of the claim.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-24, 35-36, 47-48 rejected under 35 U.S.C. 102(b) as being anticipated by Simpson (Windows 95 Uncut).

Claim 1 and 19: Simpson discloses a computer system, comprising:

- a. a display device on which windows and other graphical user interface elements are displayed (page 115, Personalizing the Screen);
- b. a cursor control device for positioning a cursor displayed on said display device relative to said user interface elements (page 137, figure 7-2);
- c. and a user interface which controls the appearance of said cursor to display a first image when said cursor is positioned over a user interface element that can be immediately accessed by a user, a second image when said cursor is positioned over a window associated with a foreground application that is in a busy state that prevents it from being currently accessed, and a third image when said cursor is positioned over a user interface element associated with a background process that is in a busy state (page 138, figure 7-3);
- d. wherein the window has a first portion associated with said application and a second portion associated with said user interface (page 36, figure 2-6), and
- e. wherein said second image is only displayed when said cursor is positioned over said first portion of the window (page 138, figure 7-3).

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Claim 2: Simpson discloses the computer system of claim 1, wherein said foreground process is an application (page 57, Understanding Programs and Documents) and said associated user interface element is a window (page 31, Managing Windows).

Claim 3: Simpson discloses the computer system of claim 2, wherein the window has a first portion associated with said application and a second portion associated with said user interface (page 32, figure 2-3), and wherein said second image is only displayed when said cursor is positioned over said first portion of the window (page 138, figure 7-3).

Claim 4: Simpson discloses the computer system of claim 1, wherein said first image comprises a pointer, and each of said second and third images comprise designs that indicate a wait state (page 138, figure 7-3).

Claim 5: Simpson discloses the computer system of claim 4, wherein each of said wait state designs is animated (page 139, Finding Automated Cursors).

Claim 6: Simpson discloses the computer system of claim 4, wherein said third image comprises a hybrid of the design of said second image and a pointer (page 138, figure 7-3).

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Claim 7: Simpson discloses a user interface for a computer, comprising: at least three different images that are associated with a cursor and that respectively indicate

- a. a currently accessible state (page 138, figure 7-3),
- b. a busy state for a foreground process (page 138, figure 7-3), and
- c. a busy state for a background process (page 138, figure 7-3); and
- d. means for detecting the position of a cursor relative to a user interface object (page 134, Personalize the Mouse) and
- e. selectively displaying one of said three images at said position to indicate the state of a process associated with the object (page 138, figure 7-3).

Claim 8: Simpson discloses the user interface of claim 7, wherein the object comprises a window associated with an application program, and the selected image indicates the state of the application (Page 31, Managing Windows).

Claims 9 and 15: Simpson discloses a method and computer readable medium for displaying a cursor in a computer user interface, comprising the steps of:

- a. detecting when the cursor is positioned relative to an object associated with a process (page 246, figure 13-4);
- b. determining whether the process is in a state where its functionality can be currently accessed or in a busy state (page 138, figure 7-3);
- c. for a process that is in a busy state, determining whether the process is operating in the foreground or the background (page 138, figure 7-3);

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- d. selectively displaying a first image for the cursor if the process is busy and operating in the foreground (page 138, figure 7-3),
- e. or a second image for the cursor if the process is busy and operating in the background (page 138, figure 7-3).

Claims 10 and 16: Simpson discloses the method and computer readable medium of claim 9 and 15, further including the step of displaying a third image for the cursor if the process is in said state where its functionality can be currently accessed (page 138, figure 7-3).

Claims 11, 17 and 18: Simpson discloses the method and computer readable medium of claims 10 and 15:

- a. wherein the image associated with an object that is currently accessible comprises a pointer (page 138, figure 7-3),
- b. the image associated with a busy foreground process indicates a wait state (page 138, figure 7-3),
- c. the image associated with a busy background process comprises a hybrid of said other two images (page 138, figure 7-3).

Claim 12: Simpson discloses the method of claim 9

- a. wherein said first image comprises a symbol that represents a wait state, and (page 138, figure 7-3)

- b. said second image comprises a combination of said symbol and an indicator that represents accessibility (page 138, figure 7-3).

Claim 13: Simpson discloses the method of claim 9:

- a. wherein said foreground process is an application and (page 57, Understanding Programs and Documents)
- b. said associated user interface object is a window (Page 31, Managing Windows).

Claim 14: Simpson discloses the method of claim 13

- a. wherein the window has a first portion associated with said application and (page 32, figure 2-3)
- b. a second portion associated with said user interface, and (page 32, figure 2-3)
- c. wherein the image associated with a foreground process that is currently busy is only displayed when said cursor is positioned over said first portion of the window (page 138, figure 7-3).

Claim 20: Simpson discloses the computer system of claim 19

- a. wherein one of said plurality of user interface objects that represents a given application comprises a window, and (page 31, Managing Windows)

- b. another of said plurality of objects that represents said given application is a member of the group comprising an icon, a minimized window and a button (page 246, figure 13-4).

Claim 21: Simpson discloses a method for displaying a cursor in a computer user interface, comprising the steps of:

- a. representing an application being executed on a computer by means of a plurality of user interface objects displayed on a desktop of the user interface (page 246, figure 13-4);
- b. detecting when the cursor is positioned over any of said plurality of user interface objects (page 246, figure 13-4);
- c. determining whether the application represented by the user interface object over which the cursor is positioned is in a busy state or a currently accessible state; and (page 138, figure 7-3)
- d. selectively displaying a first image for the cursor if the application is currently accessible (page 138, figure 7-3),
- e. a second image for the cursor if the application is in the foreground and is in a busy state, or a (page 138, figure 7-3)
- f. third image for the cursor if the application is in the background and is in a busy state, while the cursor is positioned over said object (page 138, figure 7-3).

Claim 22: Simpson discloses the method of claim 21:

- a. wherein one of said plurality of user interface objects that represents said application comprises a window, and (page 31, Managing Windows)
- b. another of said plurality of objects that represents said application is a member of the group comprising an icon, a minimized window and a button (page 246, figure 13-4).

Claims 23, 35 and 47: Simpson discloses a computer readable medium containing a user interface and a method comprising:

- a. at least two different images for a cursor, including a first image which comprises a pointer arrow having a tail, and (page 138, figure 7-3)
- b. a second image which comprises a hybrid consisting of a pointer arrow with a graphic in place of said tail, wherein said graphic represents a condition of a process; and (page 138, figure 7-3)
- c. means for normally displaying a cursor with said first image and (page 138, figure 7-3)
- d. displaying means for switching the display to said second image upon detecting that said cursor is associated with a user interface object that corresponds with said condition (page 138, figure 7-3).

Claims 24, 36 and 48. Simpson discloses the computer readable medium and method of claims 23, 35 and 47

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- a. wherein said condition is a busy state for an application, and (page 138, figure 7-3)
- b. said displaying means switches said display upon detecting that the cursor is positioned over a user interface object associated with an application in a busy state (page 138, figure 7-3).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25-34, 37-46, 49-58 rejected under 35 U.S.C. 103(a) as being unpatentable over Simpson (Windows 95 Uncut) in view of Malamud (US 6,606,101) in further view of Marks (US 6, 097,390).

Claims 25, 37 and 49: Simpson discloses the computer readable medium and method of claims 23, 35 and 47 but does not disclose wherein said condition is the dragging of an object, and said displaying means switches said display upon initiation of a drag operation. However, Malamud discloses using "information pointers" (column 12, lines 65-67, and column 12, lines 1-41) in drag and drop operations. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add supplementing the pointer when initiating a drag and drop. One would

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have been motivated to display a different pointer image when initiating a drag and drop in order to remind the user what operation they are engaging in.

Marks discloses that a visual pointer can take different shapes to indicate operations such as drag and drop (column 1, lines 36-44). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to display a different pointer image when initiating a drag and drop. One would have been motivated to display a different pointer image when initiating a drag and drop because pointer images are often used to indicate the current operation.

Claims 26, 38 and 50: Simpson, Malamud and Marks disclose the computer readable medium and method of claims 25, 37 and 49 and Malamud further discloses:

- a. further including a third image comprising a hybrid consisting of a pointer arrow with a graphic in place of said tail that represents a copy operation, and (column 12, lines 65-67, and column 12, lines 1-41)
- b. wherein said displaying means switches said display from said second image to said third image upon detecting that the cursor is positioned over a destination object to which the dragged object can be copied (column 12, lines 65-67, and column 12, lines 1-41).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to further include a third image comprising a hybrid consisting of a pointer arrow with a graphic in place of said tail that represents a copy operation, and wherein said displaying means switches said display from said second

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image to said third image upon detecting that the cursor is positioned over a destination object to which the dragged object can be copied. One would have been motivated to further include a third image comprising a hybrid consisting of a pointer arrow with a graphic in place of said tail that represents a copy operation, and wherein said displaying means switches said display from said second image to said third image upon detecting that the cursor is positioned over a destination object to which the dragged object can be copied in order to remind the user that the operation to be performed is a copy operation.

Claims 27, 39 and 51: Simpson, Malamud and Marks disclose the computer readable medium and method claims 26, 38 and 50 and Malamud further discloses

- a. wherein the graphic of said second image has a first color, and (column 9, lines 9-10)
- b. the graphic of said third image has a second, different color (column 9, lines 9-10).

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add wherein the graphic of said second image has a first color, and the graphic of said third image has a second, different color. One would have been motivated add wherein the graphic of said second image has a first color, and the graphic of said third image has a second, different color to further distinguish between the two graphics.

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Claims 28, 30, 40, 42, 52 and 54: Simpson, Malamud and Marks disclose the computer readable medium and method of claims 25, 26, 37, 38, 49 and 50 and Marks further discloses wherein said graphic of said second image includes a quantitative value that represents a characteristic of the dragged object (column 3, lines 54-67 and column 4, lines 1-11). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add wherein said graphic of said second image includes a quantitative value that represents a characteristic of the dragged object. One would have been motivated to add wherein said graphic of said second image includes a quantitative value that represents a characteristic of the dragged object to indicate the progress of the operation.

Claims 29, 41 and 53: Simpson, Malamud and Marks disclose the computer readable medium and method of claims 28, 40 and 52 and Marks further discloses wherein the graphic of said third image also includes said quantitative value (column 3, lines 54-67 and column 4, lines 1-11). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add wherein the graphic of said third image also includes said quantitative value. One would have been motivated to add wherein the graphic of said third image also includes said quantitative value in order to indicate the state of the process being executed.

Claims 31, 43 and 55: Simpson, Malamud and Marks disclose the computer readable medium and method of claims 30, 42 and 54 and Marks further discloses wherein said

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quantitative value indicates the number of objects that are being dragged (column 3, lines 54-67 and column 4, lines 1-11). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add wherein said quantitative value indicates the number of objects that are being dragged. One would have been motivated to add wherein said quantitative value indicates the number of objects that are being dragged to know the magnitude of the operation about to be executed.

Claims 32, 44 and 56: Simpson, Malamud and Marks disclose the computer readable medium and method of claims 30, 42 and 54 and Marks further discloses wherein said quantitative value indicates the size of one or more objects being dragged (column 3, lines 54-67 and column 4, lines 1-11). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add wherein said quantitative value indicates the size of one or more objects being dragged. One would have been motivated to add wherein said quantitative value indicates the size of one or more objects being dragged to know the magnitude of the operation about to be executed.

Claims 33, 45 and 57: Simpson, Malamud and Marks disclose the computer readable medium and method of claims 30, 42 and 54 and Marks further discloses wherein said graphic comprises a geometric object, and the size of said geometric object is dynamically varied to accommodate said quantitative value (column 3, lines 54-67 and

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column 4, lines 1-11). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add wherein said graphic comprises a geometric object, and the size of said geometric object is dynamically varied to accommodate said quantitative value. One would have been motivated to add wherein said graphic comprises a geometric object, and the size of said geometric object is dynamically varied to accommodate said quantitative value to know the magnitude of the operation about to be executed.

Claims 34, 46 and 58: Simpson, Malamud and Marks disclose the computer readable medium and method of claim 23, 35 and 47 and Marks further discloses wherein said graphic indicates that an object being dragged will be deleted (column 3, lines 54-67 and column 4, lines 1-11). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention for Simpson to add wherein said graphic indicates that an object being dragged will be deleted. One would have been motivated to add wherein said graphic indicates that an object being dragged will be deleted in order for the user to know that the object being dragged will not reside in two locations, only in the destination location.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Heffington whose telephone number is (571) 270-1696. The examiner can normally be reached on Mon - Fri 8:00 - 5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Weilun Lo can be reached on (571) 272-4847. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH
11/6/07

BA HUYNH
PRIMARY EXAMINER

A large, stylized handwritten signature in black ink is written over the printed name and title. The signature consists of several loops and a long horizontal stroke at the bottom.